

**ABSTRACT OF THE DISCLOSURE**

A network includes a transmitter for transmitting a stream of known symbols and unknown symbols in an optimal distribution through a transmission channel to a receiver that receives the transmitted stream of known symbols and unknown symbols distorted by intersymbol interference (ISI). The receiver uses a known symbol generator and a precursor cancellation decision feedback equalizer (PC-DFE) to cancel precursor ISI from symbols that have not yet been decided. The transmitter comprises a known symbol distribution controller for inserting a plurality of known symbols into an outgoing stream of unknown symbols in an optimum distribution in order to improve the performance of the PC-DFE in the receiver.